MHREF
MONTANA HEALTH RESEARCH AND EDUCATION FOUNDATION

April 27, 2007

An Affiliate of MHA
An Association of Montana Health Care Providers

Commission's Secretary
Office of the Secretary
Federal Communications Commission
9300 East Hampton Drive
Capitol Heights, MD 20743

Regarding FCC WC Docket No. 02-60; Rural Health Care Support Mechanism

Dear Chairman Martin,

Please accept this application to the FCC pilot program WC Docket No. 02-60 by the Montana Health Research and Education Foundation (MHREF) on behalf of MHA, a Consortium of health care providers including rural and urban not-for-profit hospitals in the state of Montana and the Montana Healthcare Telecommunications Alliance (MHTA) an affiliate society of MHA.

MHTA has been in existence since 1997. MHTA has advocated for the cost reduction of telehealth networks through shared resources and reduction of transmission costs; and has promoted interoperability in and among systems. The Universal Service Fund was designed to provide telecommunications relief for rural communities, and since1997 the program has provided significant discounts for telecommunications costs for Montana's healthcare community. MHREF is applying for the FCC Pilot Program on behalf of MHTA to build a statewide telecommunications backbone for health information technology including activities such as telehealth (including telemental health), electronic health records, teleradiology, and any other healthcare data application.

Through this Pilot Program we propose to develop a statewide infrastructure with the capacity to connect all hospitals, mental health centers and community health centers through a secure, dedicated broadband healthcare network. The implementation of this new network will enable multiple applications such as high definition videoconferencing, radiology, electronic health records and other data services to run over the network simultaneously. It will also position all healthcare entities in the state of Montana for the development of future applications. Another advantage of building this infrastructure is that it will support HIT initiatives that are developed at the local, regional and state level.

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It is through the support of this FCC Pilot Program that we believe the implementation of this statewide broadband network is possible. We look forward to the implementation of this project and the health services it will provide to the communities and citizens we serve in rural Montana.

Please feel free to contact either me or Kip Smith, MHREF Director, if you have any questions regarding this proposal. Thank you for the opportunity to submit this proposal.

Sincerely,

Dick Brown
Senior Vice President

FRONTIER ACCESS TO HEALTHCARE IN RURAL MONTANA (FAhRM) – A MULTIDISCIPLINARY APPROACH IN THE BIG SKY COUNTRY

Montana Health Research and Education Foundation (MHREF) Montana Healthcare Telecommunications Alliance (MHTA); Montana Office of Rural Health (MORH)

FEDERAL COMMUNICATIONS COMMISSION
WC Docket No. 02-60

A Statewide Telehealth Application

May 3,2007

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PROGRAM - Federal Communications Commission: WC Docket No. **02-60**
PROJECT TITLE: Frontier Access to Healthcare in Rural Montana (FAhRM) – A Multidisciplinary Approach in the Big Sky Country
COLLABORATIVE PARTNER(S): Montana Health Research and Education Foundation (MHREF), Montana Healthcare Telecommunications Alliance (MHTA); Montana Office of Rural Health (MORH).
PROJECT DIRECTORS: Mr. Kip Smith, Executive Director MHRF; Ms. Doris T. Barta, President MHTA
ORGANIZATION NAME: Montana Health Research and Education Foundation

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PROJECT PERIOD: **24** months from award notification

Brief Introduction:
This collaborative group is proposing to implement a coordinated, multidisciplinary project to assist rural and urban healthcare providers in building a statewide telecommunications backbone for health information technology (HIT) including activities such as telehealth (including telemental health), electronic health records, teleradiology, and any other healthcare data application. It is our vision to develop a statewide infrastructure to connect all hospitals, mental health centers and community health centers through a secure, dedicated broadband healthcare network. Advantages include budget neutrality with the potential of cost reduction for those who currently have connectivity; offering connectivity to those who currently do not have that capability; and expanded bandwidth for multiple applications for everyone. For example today most rural Montana facilities have a single T-1 line that at times does not provide the bandwidth needed to run multiple applications. The implementation of this new network will enable multiple applications such as high definition videoconferencing, radiology, electronic health records and other data services to run over the network simultaneously. It will also position all healthcare entities in the state of Montana for the development of future applications. Another advantage of building this infrastructure is that it will support HIT initiatives that **are** currently being developed at the local, regional and state level.

1. Identify the organization that will be legally and financially responsible for the conduct of activities supported by the fund.

Who We Are:
Montana Health Research and Education Foundation (MHREF) is submitting this Pilot Program application to the Federal Communications Commission on behalf of the Montana Healthcare Telecommunications Alliance (MHTA) to build a statewide telecommunications backbone for health information technology. MHREF is the fundraising arm of MHA- a consortium of health care providers including rural and urban not-for-profit hospitals in the state of Montana.

Montana Healthcare Telecommunications Alliance:

The **Montana H ltl Telecommunications Alliance** (MHTA), an affiliate agency of MHA, began in 1995 when individuals from healthcare organizations across Montana came g o discuss common s, share p and p advancements in l through video teleconferencing and telemedicine. It is through this collaborative effort that the Montana Healthcare Telecommunication Alliance was with the adoption f by-laws in 1997 As a ti of key t ltl t l the s primary goal is to p t the widespread adoption of telehealth tl oration, interoperability and t of telecommunications.

MHTA meets on a quarterly basis via teleconferencing MHTA is open to individuals who are involved in healthcare telecommunications projects in the state of t who p t and enhance healthcare programs and services in concert with their organization's mission. MHTA is comprised of directors of telehealth networks throughout Montana representatives from Blue Cross/Blue ld d other are , and the telecom corporations Members' input and involvement are vital to the telemedicine landscape in Montana. Through the utilization of MHTA federal and state advocacy ffc t members are able to ti l participate in key decisions affecting telemedicine in Montana. MHTA provides an influential voice gl h alliance voting process that has had a major impact on legislative, telecommunications and other strategic issues within our state and region. (S l MHTA Membership Roster).

g **of MHTA include:**

1) **Cost Reduction** for the operation of t e networks th shared resources and reduction of transmission costs.
2) **Promoting Interoperability** among and between systems by exploring the use of statewide network
3) ti **Services** tl gh tl use of services available, the promotion of d vices and through the development of new services.
4) The p f **Legislative Activities**, which address universal access, , funding issues, telecommunications , and licensures.
5) The development of a bl approach for **Evaluation and Resea** of t systems in th t t of Montana.

MHTA has a long history of being a leader in development of telemedicine programs, t only in Montana but on a national scale. The three largest telemedicine networks in the state are founding members of MHTA: the Eastern Montana T dicine Network was formed in 1993; thc REACH Montana Telemedicine Network was formed in 1994; l the Partners in Health Telemedicine Network was fo med in 1995. se three networks have been working collaboratively fc the past thirteen years and represent 75 facilities in Montana that are currently accessing healthcare services via telemedicine on a regular basis. (S attached MHTA Map).

Telehealth is quickly becoming an integral component in the delivery of h services t g M t Presently **the** Universal Support mechanism allows our rural healthcare cilities to participate in telehealth where otherwise it would not be financially feasible. Telecommunications costs in a vast geographic area such as Montana pose the g t t threat to the long term sustainability of telehealth services The FCC Pilot Program provides an

opportunity for us to make sure that the rural health support mechanism in Montana is designed to support telehealth functions at optimum efficiency, ensuring that all eligible entities are able to take advantage of the program made available through this application.

In preparation for submission of the FCC Pilot Program application, (herein referred to as the FAhRM Project) an MHTA workgroup convened to begin preliminary planning and budget development. We decided the most logical and opportune approach for us to appropriately address the needs of healthcare providers on a statewide basis would be to design a two year phase-in approach to this project. The first year we propose to fund six (6) **DS3** Routers which will be strategically placed throughout the state to strengthen the capacity of the core network that already exists within MHTA membership. Other costs in year one include funding a design study so that we can most efficiently develop a cost-neutral network that provides benefit to all potential partners throughout the State. Our request to the FCC Pilot Program is $257,652; we will secure an additional $105,148 for matching funds and project management from participating hospital foundations, local foundations and corporations. Our statewide support is reflected in the financial commitment for the required 15% match from St. Vincent Healthcare Foundation in Billings ($10,000); Billings Clinic Foundation in Billings ($10,000); Benefis Healthcare Foundation in Great Falls ($10,000); St. Patrick Hospital Foundation in Missoula ($10,000); Community Medical Center in Missoula ($10,000) and Bozeman Deaconess Foundation in Bozeman ($10,000). We have received positive responses from regional foundations who have indicated they will be supportive of this project should it be funded by FCC (e.g. Murdock Charitable Trust, Paul Allen Foundation and the Montana Blue Cross/Blue Shield Foundation). We are confident we will receive a commitment from contacts made for the additional $66,500 non-eligible expenses required to implement this project (we have already secured the $38,648 required 15% match through hospital foundations identified above).

Year two of the FAhRM Project will be to implement the design that was developed in year one. We recognize that the funding for the second year may be significantly larger due to the broad based needs of the state of Montana and may be as much as $2 million (however we will not know for sure the cost until we have completed our design study). Our plan is to seek the 15% match from the State of Montana for year two of the project. Preliminary conversations with Governor Schweitzer's representative indicate a positive response from the Governor to this project and the statewide implications it has for strengthening health care access.

Due to the MHTA affiliation with MHA, **Montana Health Research and Education Foundation** was chosen as the applicant entity for this proposal. MHREF is the fundraising entity for MHA and since all members of the MHTA telemedicine networks and all potential members of this statewide broadband secure healthcare network are members of MHA, it was a logical fit. MHA is an association whose members provide the full spectrum of health care services in Montana. Every acute care hospital in the state is a member of MHA, ranging from the smallest Critical Access Hospitals that provide primary care services in Montana's rural communities to the largest tertiary care hospitals in the state. Regardless of size, these facilities are community-based, locally governed and share a commitment to improving the health status of their communities. MHA members offer communities an integrated and coordinated continuum of high quality, affordable and innovative health care and community-based services. MHA's commitment to the success of this project is evidenced by their letter of commitment.

Montana Health Research and Education Foundation:

The Montana Health Research and Education Foundation (MHREF) was established by MHA as a not-for-profit 501(c)(3) organization to provide education and research for today's changing health care market. MHREF has a long history of leadership on rural and frontier healthcare issues beginning in 1986 with the Medical Assistance Facility (MAF) Demonstration Project; the nation's first – and recognized as its most successful – limited service rural hospital model. The Critical Access Hospital (CAH) program created in 1997 is based on Montana's MAFs. MHREF works with all of Montana's forty-five Critical Access Hospitals - more than 75 percent of the state's general acute care hospitals.

At the request of the Department of Public Health and Human Services (DPHHS), MHREF administers the federal Rural Hospital Flexibility Grant to support CAHs. Within this Flex grant program, MHREF established the Montana Rural Healthcare Performance Improvement Network, or PIN, to develop and provide a collaborative support system which will enable small rural hospitals to have the ability to deliver quality care and achieve customer satisfaction. Additional funding through a three-year Rural Health Network Development Grant from the Federal Office of Rural Health Policy has been utilized to expand the PIN's clinical improvement study program and to develop a Montana model for Balanced Scorecard implementation.

MHREF also administers the Hospital Bioterrorism Preparedness Program grant for the state. These Health Resources and Services Administration grants have enabled hospitals to assess their preparedness and to begin formulating plans to strengthen their readiness. A significant component of this program is establishment of the statewide Montana Healthcare Mutual Aid System (MHMAS). In July of 2006, MHREF distributed more than $900,000 in preparedness awards to address priority needs of 51 hospitals identified in their emergency preparedness planning and Hazard Vulnerability Analysis.

In addition, MHREF operates the COMFORT ONE program for DPHHS. This program allows patients diagnosed with a terminal illness or those designated by their physician as having a do-not-resuscitate (DNR) order to say no to CPR and other lifesaving measures in an emergency. Designed for the seriously ill patient who is not in the hospital, COMFORT ONE provides on-the-spot identification to EMS personnel that the patient does not want to be resuscitated. Finally, MHREF continues to administer the Montana Capital Assistance Program for the Montana Facility Finance Authority. This program assists small rural hospitals with the development of a capital improvement plan that validates or justifies their proposed capital expenditures. The program is designed to help these facilities develop a financing package for the Authority and other lenders that meets financing requirements.

The Performance Improvement Network (PIN) continues to grow both in member participation and program activities. In December 2006, the PIN wrapped-up a two-year Agency for Health Research and Quality (AHRQ) Health Information Technology (HIT) Planning Grant to identifying cost-effective HIT solutions to decreasing adverse drug events and medication errors in Montana CAHs. A one-year pilot project focused specifically on CAH medication event report processes identified the need for ongoing financial, technical and human resource assistance in

order for Montana frontier CAHs to successfully implement HIT. A copy of the final report is available on the PIN website at www.mtpin.org.

MHREF provides extensive continuing educational opportunities for health care organizations throughout Montana. Examples include:

- ***Continuing Education Modules*** designed for rural clinicians to address the recommendations of the 2001 Institute of Medicine report, *Crossing the Quality Chasm*. The report described a gap between evidence-based best practice and what clinicians are able to achieve on a daily basis for patients. Clinicians complete modules on topics that include: Analyzing current care; generating hypotheses about the link between action and results; developing ideas about how to improve; designing a test of a change in practice; and developing a plan to disseminate and sustain successful results.
- *MED* ***Learn:*** MHREF partnered with the Montana Health Network to provide onsite training with Medi Simulators on Advanced Trauma Life Support. MHREF identified clinicians in Montana who could serve as regional faculty to deliver this and future onsite continuing education to interdisciplinary teams from rural communities.
- ***Annual Medical Staff Leadership Conference:*** MHREF sponsors an annual continuing education conference for Medical Staff. 2006 topics included improving stroke and cardiac emergency care; developing interdisciplinary quality improvement teams; translating research into practice; managing research projects in small rural settings; and smoking cessation.
- ***Annual Director of Nursing Conference:*** The DON Conference is designed to provide leadership development, quality improvement and clinical improvement continuing educational opportunities targeted to the unique needs of DON's serving frontier and underserved communities in Critical Access Hospitals.

Montana Office of Rural Health (MORH):

The **Montana Office of Rural Health** is a consortium partner to the FAhRM Project since one of their primary focus areas is health care access in rural Montana. MORH has been in existence since 1991 and is funded through the Federal Office of Rural Health Policy; it is a federal-state partnership to help rural communities build their health services through public and private partnerships and initiatives in rural health development. MORH is a resource for information on rural health issues, data, research and funding opportunities. MORH participates in 3RNet, a multi-state rural health professions recruitment program; manages the Small Hospital Improvement Program; and provides technical assistance to rural communities on rural health projects. The Montana Office of Rural Health (MORH) and the Montana Area Health Education Center (AHEC) are housed together and are administered through the Division of Health Sciences, and are located at Montana State University in Bozeman.

The mission of the MORH is: To serve Montana communities through collecting and disseminating information within the state, improving recruitment and retention of health professionals into rural areas, providing technical assistance to attract more federal, state, and foundation funding for rural health, and coordinating rural health interests and activities across the state. Further the MORH mission is to improve the supply and distribution of health care professionals, with an emphasis on primary care, through community/academic educational partnership, to increase access to quality health care. In the MORH 2007 strategic plan, the

values of addressing the broader determinants of health; building partnerships; working collaboratively; supporting communities; and serving as an advocate for rural Montana were articulated by the MORH/AHEC Board.

The Montana Office of Rural Health is a partnership organization, developed to help rural communities build their health services through public and private partnerships and initiatives in rural health development. The federal Office of Rural Health Policy funds state offices of rural health in all 50 states. Our office also houses the Area Health Education Center, and is affiliated with the University of Washington, WWAMI Medical Program. Projects include:

- Small hospital improvement grants;
- Technical assistance on project development;
- Grant writing;
- Strategic planning, including the Community Health Services Development Process;
- Montana Healthcare Workforce Advisory Committee;
- Placement of medical student in rural clinical rotations; and
- Health information technology projects

MORH has a steering committee comprised of rural health representatives from throughout Montana. MORH is staffing two important statewide initiatives: the Montana Healthcare Workforce Advisory Committee, which is advising the Montana Board of Regents on healthcare workforce investments and strategies; and the Health-e Montana, a statewide HIT initiative. Health-e Montana.

The mission of the **Montana Area Health Education Center** is: To improve the supply and distribution of health care professionals, with an emphasis on primary care, through community/academic educational partnership, to increase access to quality health care.

The Montana AHEC is affiliated with the Regional WWAMI AHEC Program at the University of Washington School of Medicine. The other remote site AHEC programs participating with the Regional WWAMI AHEC are located in Seattle (Western Washington AHEC), Spokane (Eastern Washington AHEC), Laramie (Wyoming AHEC), and Boise (Idaho AHEC). The Regional WWAMI AHEC programs to accomplish the following objectives: (a) promote careers in health care in underserved settings, (b) develop and support community-based education programs, (c) assess health needs in rural and underserved communities, (d) create program-wide linked web sites, and (e) strengthen the regional WWAMI AHEC structure.

The Montana State Office of Rural Health provides the following programs which are of benefit to the rural communities that will be served through this network:

- **Healthcare Workforce:** The Montana AHEC/ORH is working with state agencies, the Office of the Commissioner of Higher Education, the Montana Hospital Association, the Montana Primary Care Association and many other partners to form Healthcare Workforce Task Force, and implement recommendations of the Primary Care Liaison Group's Report "Montana's Health Care Workforce", released in January 2006.
- **U-DOC:** The U-DOC Program is a six-week summer program at Montana State University for rural and underserved high school students who have a strong interest in medicine and other health professions.

- **Rural Underserved Opportunity Program (RUOP):** The Montana AHEC arranges placements for WWAMI medical students in rural and underserved communities.
- **Community Health Services Development Program (CHSD):** The CHSD program is a community-based model developed and implemented by the University of Washington School of Medicine (UWSM) to improve access to health care and quality of health care in rural communities. Although traditionally focusing on health care provided by rural hospitals, the CHSD program has expanded its activities to assist with broader health care concerns *and* the impact of health care delivery systems on the local economy.

The Montana Office of Rural Health can play a key role in the development and implementation of a statewide broadband telehealth network. As is evident by the numerous activities they sponsor that improve healthcare access to rural Montana, their collaboration and educational network will prove invaluable as we develop the study design and implement the plan to increase telehealth access to all Montana communities, with an emphasis on rural access to healthcare.

Although the activities of AHEC are not directly related to direct services in healthcare, they are very important to the retention of healthcare services in Montana and are therefore included in this proposal. AHEC provides education to our healthcare providers in Montana that reduces professional isolation, increases physician and allied health provider retention and improves access to healthcare in our State.

Statement of Need:

Montana, the 4th largest state in area (147,138 square miles), had a population of 902,195 in the 2000 census. In 2005, the population estimate was 935,670; a 5.3% increase over the five years. Montana ranks 44th in total population. The population density in the state is approximately 6.4 persons per square mile and we are considered to be a rural and frontier state. Of the 56 counties, 46 are designated as *noncore counties* (frontier). The average population density of the four *metropolitan counties* (urban) is 32.6 per square mile, the six *micropolitan counties* (rural) 19.95, and the 46 *noncore counties* (frontier) 3.21. Using these classifications, 65.2% of Montana residents live in rural and frontier areas. Although Montana has experienced an overall increase in population, 33 of the 56 counties have lost residents over the past five years; 32 of the 33 are rural and frontier counties.

The largest minority population in Montana is *American Indian.* The 2005 estimated population of *Native Americans* living in Montana was 59,883 (6.4%). The *American Indian* population includes 12 federally recognized tribes. There are seven Indian Reservations in the state. Other minority populations are *African Americans* (0.4%) and *Hispanics* (2.4%). Therefore, the race/ethnicity of the Montana population is 91.1% white, 6.4% American Indian, 2.4% Hispanic and 0.4% African American.

The size of Montana, low population density and the fact that nearly two-thirds of the residents live in rural and frontier areas illustrates the challenge in providing access to quality health care for all citizens. The basic infrastructure of the health care delivery system in counties is built around the hospital(s), public health department, medical clinic(s), nursing homes and emergency medical systems. However, there are six counties without hospitals and nine counties having no physicians. Of the 60 hospitals in Montana, 45 are designated as *Critical Access*

Hospitals. Only nine counties have two hospitals; in three counties the second hospital is an Indian Health Service facility and in one the second hospital is the Veterans Administration facility. Providing accessible, high quality health care to rural Americans requires a sufficient number of health care providers, with training appropriate to the population they serve. Telemedicine applications provide the greatest opportunity to provide services to the rural and frontier areas of Montana.

Factors contributing to the problems of rural health care systems are:

- the inability to recruit and retain health care providers;
- geographic barriers to accessing health care by rural residents;
- the tendency for rural residents to leave the local community for health care services;
- the financial drain to the local economy when patients and health care providers **go** to urban centers to receive health care services and training. For example, when patients and health care providers travel to urban centers, they stay in hotels, shop and buy groceries. All of these activities take away from the financial well-being of the rural community that is competing for those same dollars.

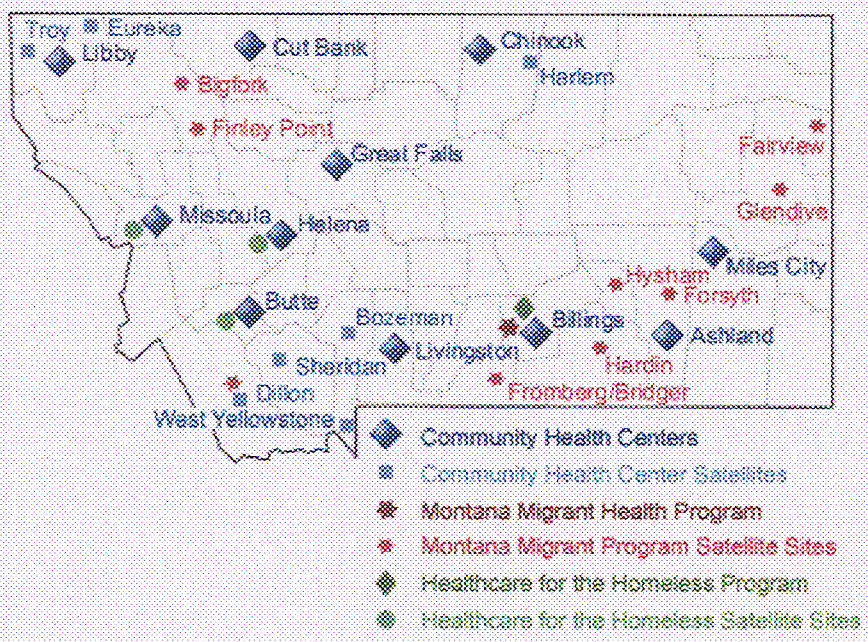
Family physicians and other health care professionals are increasing unwilling to locate in rural areas. Some of the reasons include:

- professional isolation – the lack of regular interaction with health care providers in urban centers;
- having to be on call all of the time, without relief;
- needing to keep up with the advances of medicine and not having the latest equipment;
- limited access to continuing medical education programs often needed to maintain national board certifications.

Through the years, MHTA members have recognized that telehealth can have an impact on each of these barriers to rural health access. For example, rural providers do not feel as isolated when they can attend "grand rounds" on a regular basis with their constituency in an urban center. Telemedical consults allow rural providers to remain the primary physician while seeking specialist services for their patients. The transfer of digitized radiology films allows a patient to become stabilized in a rural community, reducing costly unnecessary patient transports.

Linkages to Community:

Montana has Federally Qualified Health Centers in Libby, Cut Bank, Chinook, Great Falls, Missoula, Helena, Butte, Livingson, Billings, Ashland and Miles City, with satellites in Troy, Eurkea, Harlem, Bozeman, Sheridan, Dillon, and West Yellowstone. The Migrant Health Program office is in Billings, with satellites in Bigfork, Finley Point, Dillon, Hardin, Fromberg/Bridger, Hysham, Forsyth, Glendive, and Fairview. The satellites are very small communities serving the migrant farm workers. Additionally, Montana has a Healthcare for the Homeless Program in Billings, with satellite sites in Missoula, Helena and Butte.

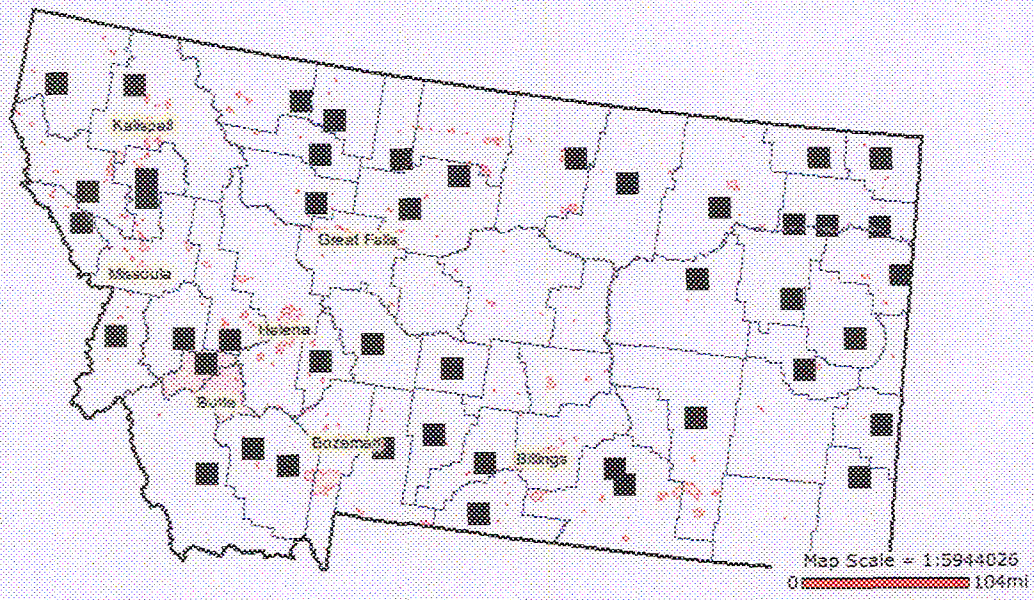


This network of clinics and health centers is a major provider of care to Montana's unensured and underensured populations. Many of the clinics were started in collaboration with, and through the leadership of Critical Access Hospitals in the community, to assure a source of continued and high quality healthcare to residents. We propose to work with the Federal Qualified Health Centers throughout Montana and will, with the study design, develop the most appropriate and cost effective technical plan that will address the Community Health Center's needs as well as ensure that the long term sustainability of the network beyond grant funds.

We envision a multitude of networks within the statewide network. MHTA members have found that having individual networks using a common telecommunications backbone is a very cost effective way to implement telehealth applications in our state. The Community Health Centers could conceivably have their own independent network that uses this statewide infrastructure, as well as the Mental Health Centers across the state. The opportunity for all of rural Montana citizens, regardless of geographic origination, to increase access to healthcare through this statewide infrastructure is our greatest challenge and through FCC funding, can and will be our greatest accomplishment.

Family Medicine Residency: The Montana Residency Program is housed out of the Deering Community Health Center in Billings. All City/County Health Department programs are under one roof and Montana Family Medicine faculty and resident physicians serve as the center's primary care providers. The Deering Clinic is located within Yellowstone County Community Health Center. The Montana Residency Program regularly uses the MHTA telemedicine networks to provide clinical oversight for the residents who are placed in rural communities.

Montana's Hospital and Healthcare System



Of the sixty hospitals in Montana, 45 are Critical Access Hospitals and 3 are Indian Health Service Facilities. Many CAHs are affiliated with larger health systems for telemedicine, management and other services. Montana's hospitals are very active in MHA. MHA has been a key partner in the development of the FAhRM Project and will provide leadership in developing the program and educating the CAHs regarding the proposed network development.

Linkages to Improve Health of the Underserved:

The FAhRM Project will be affiliated with Montana's safety net programs – the Community Health Centers, Migrant Health Services, and the Homeless Health Center Program. The FAhRM Project - a statewide program - will address needs of the Montana health care industry/delivery system and the citizens of Montana by accomplishing the goals and objectives listed and discussed in this proposal. Specifically, through improved access to quality healthcare, we propose to increase the quality and years of healthy life for all Montanans and to reduce and eliminate health disparities; especially those disparities directly associated with ethnicity, education, income, disability and place of residence.

The **primary focus** of this FAhRM Project is to expand access to healthcare services in rural Montana. There is an existing outreach network in Montana where rural communities provide primary care services, and seek specialty services from urban counterparts. Many rural communities use services from a number of larger facilities within their geographic region. The expansion of the existing broadband infrastructure will not only enhance existing outreach activities, but will also encourage outreach into other areas of the state. Rural communities will have greater capacity to seek specialty services throughout the whole state of Montana, easing the geographic burden of a large, sparsely populated state like Montana.

2. Identify the goals and objectives of the proposed network.

This FCC Pilot Program application has **one overall goal** which is: **To develop a statewide infrastructure with the capacity to connect all not for profit health care providers in the state of Montana through a secure, dedicated broadband healthcare network.**

Objective: Promote Interoperability among and between systems by exploring the **use** of a statewide network to improve/expand capacity on the existing statewide infrastructure

Action steps:

- Identify, negotiate with and contract with a telecommunications carrier to provide the expanded network identified in this proposal. **A** Request for Proposals (RFP) will be developed and provided to telecommunications carriers who serve Montana to ensure a competitive process has occurred to identify and purchase the best service for the best cost.
- Purchase and place six DS3 routers in strategic communities. This will expand the existing Transaria Cloud so that more telemedical applications can be conducted simultaneously over the network from multiple urban healthcare providers to patients located in rural areas.

Objective: Promoting connectivity and outreach through the use of services available, the promotion of shared services and through the development of new services.

Action Steps

- Develop a competitive RFP for contracting with a business to conduct a network design study for the state of Montana
- Conduct a Design Study to identify the existing need for telecommunications capacity in Montana and plan for a strategic probable expansion based on community need and strategic business development plans
- Develop a state wide plan for added connectivity for all existing telemedicine networks, for all potential telemedicine services and with the capacity to connect all healthcare providers in the state of Montana
- Offer connectivity to those health care providers who currently do not have the capacity to use a broadband infrastructure and improve services for those communities through the use of telemedicine applications

Objective: Cost Reduction for the operation of telemedicine networks through shared resources and reduction of transmission costs.

Action Steps:

- Provide budget neutrality with the potential of cost reduction for those who currently have connectivity and a cost effective plan for those sites who want to engage in telehealth activities
- Expand bandwidth for multiple applications which will reduce the cost of multiple T1 lines into healthcare facilities. The design study will identify new and/or enhanced programs and promote program development.

Objective: Year two – secure funding to implement the design study conducted in year one.

Action Steps:

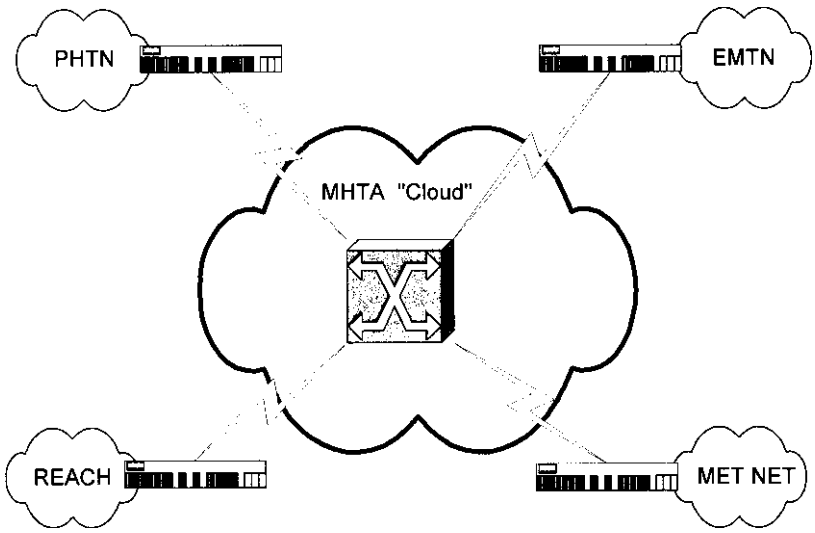
- Provide education and information regarding the expanded broadband network infrastructure that is available for all non-profit healthcare entities in the state of Montana.
- Secure commitments from current and new partners to purchase services over the expanded broadband infrastructure
- Develop **a** competitive RFP for expansion of current broadband network. Identify, negotiate with and contract with a telecommunications carrier to provide the expanded network identified in this proposal. Use the RFP process to ensure a competitive process has occurred to identify and purchase the best service for the best cost.
- Connect all not for profit organizations in the state to the statewide broadband secure healthcare network.

3. Estimate the network's total cost for each year.

Current network connectivity:

Currently the MHTA member networks (specifically EMTN, RMTN and PHTN) collaborate through a "Video only V P N cloud. This cloud is configured as a "mesh network" allowing any network to connect with any other member network at any time. This is accomplished through individual members leased copper T-1 into a vendor (Transaria) which provides the backbone routing on its network. The VPN network is configured as its own "subnet" allowing for quality of service, security and management between the members. The network functionality is enhanced via each of the members' PolyCom Accord MCU bridges which provide firewall security and routing to the member networks. **A** visual display of the current connectivity is provided below.

Current MHTA Transaria Cloud

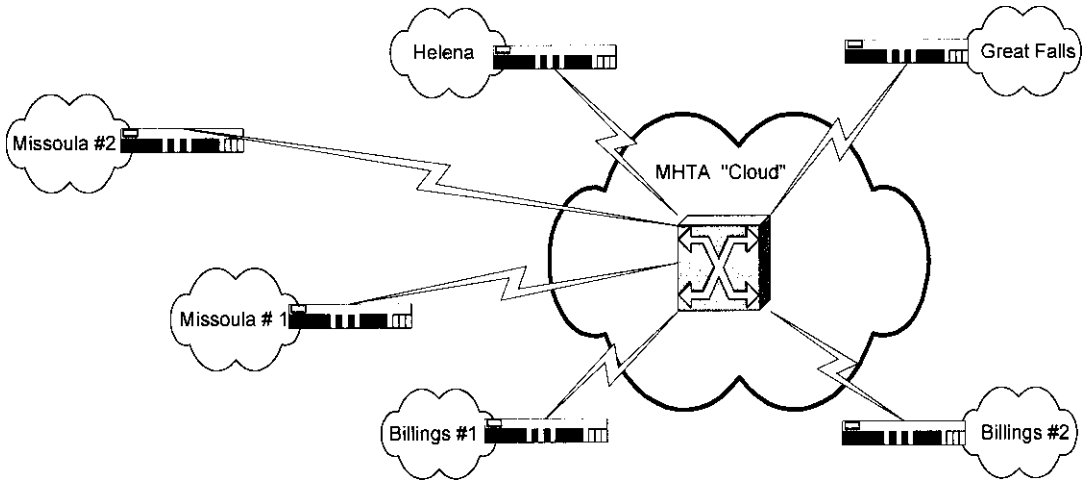


rural site in the network. Mental health applications are currently being conducted statewide; any mental health provider in any community in the state can provide services to any rural patient in the state. This expanded core will allow these types of healthcare exchanges to occur simultaneously without interruption of much needed care in our rural communities.

Telemedicine services are starting on the steep growth curve that has been expected for years. The increase in the consults over the previous six months that has brought us to the saturation point, are expected to increase exponentially. The future growth of exchanging some data streams and radiologic imaging to follow patient services are in the works. The proposed funding will increase capacity 45 times the existing service levels, which will allow the growth to occur naturally and not be constrained just when the support has to be there to ensure quality and consistency between facilities.

The statewide dedicated back bone will add connectivity for Community Medical Center and St. Patrick Healthcare, both of which are based in Missoula. Expanded bandwidth will allow increased capacity for the Cardiac network housed out of St. Patrick Healthcare as well as the proposed Western Montana Telehealth Network that will be based out of Community Medical Center. Connectivity in western Montana is not as robust as it is in the rest of the state, so this expansion will provide a much needed bandwidth capacity for these centers as they increase telehealth activity in the rural communities they serve. Requested funding will also provide the foundation to allow the future growth to as many as eight more regional sites to join the interchange in future development.

Proposed Transaria Cloud



The continued growth of the hub-and-spoke connectivity between networks will allow patients to access services not available in their rural and urban centers. The continued growth of local connectivity to secure and robust services in urban or regional centers of excellence will increase compliance and early diagnosis of problems, with the effect of overall cost of care decreasing over time. The maturity and successes of the research and technical capabilities of the

Prior to IT videoconferencing the Transaria cloud became the beginning of developing a broadband interconnection among networks around the state. This Transaria cloud was designed because of the interactivity that occurs among the three largest networks in the state. For example, during a recent twelve month time period, the 3 largest networks connected with each other 627 times, as is indicated below:

EMTN to PHTN (03/01/06 to 02/28/07)

Total Conferences	Mental Health	Medical	Education	Other
266	144	9	68	45

EMTN to REACH (03/01/06 to 02/28/07)

Total Conferences	Mental Health	Medical	Education	Other
199	142	4	30	23

PHTN to REACH (03/01/06 to 02/28/07)

Total Conferences	Mental Health	Medical	Education	Other
97	31	9	30	27

Below is a snapshot of telehealth activities over a twelve month timeframe for two MHTA networks (03/01/06 to 02/28/07):

EMTN		**PHTN**		
Mental Health	1,106	Telemedicine	4,891	(includes tele-pharmacy)
Medical	1,019	Medical	298	(medical consults no patient)
Education	297	Education	947	
Other	456	Other	417	
Total Conferences:	2,878	Total Conferences	6,553	

Proposed network connectivity:

As discussed earlier, this FAhRM Project includes a two year phase-in approach to this project The first year we propose to fund six (6) DS3 Routers which will be strategically placed throughout the state to strengthen the capacity of the core network that already exists within MHTA membership. Those six Routers will be placed in the following: (2) Billings; (2) Missoula; (1) Great Falls and (1) in Helena. The cost for this enhancement to the network is budgeted at $296,300 with FCC funds in the amount of $257,665 and the 15% match in the amount of $38,648, which will be covered by a financial commitment from hospital foundations participating in this project. The non-eligible funds in the amount of $66,500 will be matched through financial and in-kind contributions from program participants.

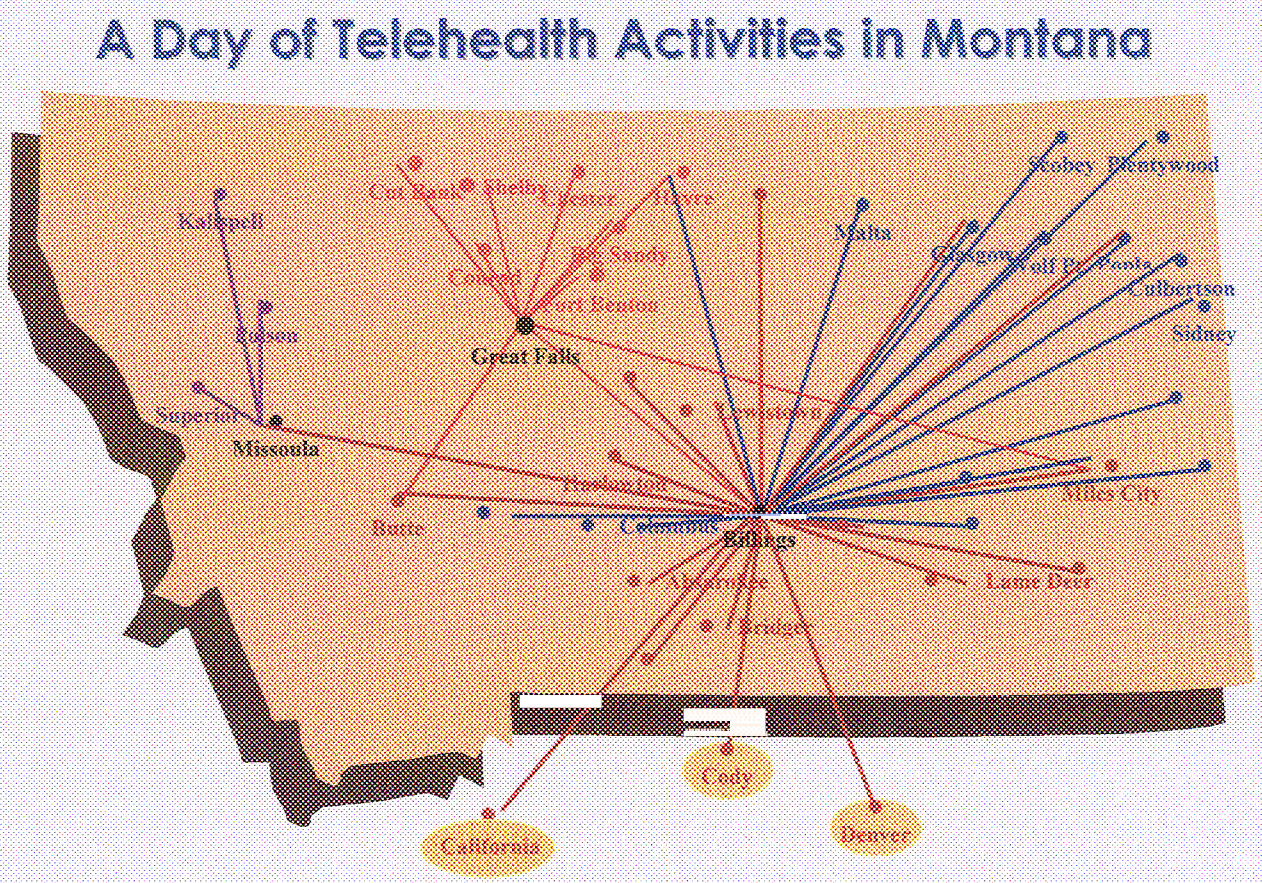
FCC funds will provide the technology to expand and secure a solid foundation for future transport of a large variety of medical data and services. The current proven network interchange and architecture has reached capacity and the requested technology will expand capacity as well as increase the number of institutions and patients serviced. This will be of great benefit to our rural partners. Although this proposed project strengthens urban connectivity, this expanded core will enhance the capacity of rural facilities in Montana to share resources with each other such as radiology services, pharmacy services, physical therapy, diabetes care and mammography services. The expansion of the core network will expand the ability to serve any

interconnected networks can attest to the patient care services being provided to the rural and urban centers today.

Year two of the FAhRM Project will be to implement the design that was developed in year one. We recognize that the funding for the second year will be significantly larger due to the broad based needs of the state of Montana and may be as much as $2 million (however we will not know for sure the cost until we have completed our design study). Our plan is to seek the 15% match from the State of Montana for year two of the project. Preliminary conversations with Governor Schweitzer's representative indicate a positive response from the Governor to this project, and the statewide implications it has for strengthening health care access.

It is MHTA's vision to develop a statewide infrastructure to connect all hospitals, mental health centers and community health centers through a secure, dedicated broadband healthcare network. Advantages include budget neutrality with the potential of cost reduction for those who currently have connectivity; offering connectivity to those who currently do not have that capability; and expanded bandwidth for multiple applications for everyone.

We want to move past a facility saying "I can't join the telemedicine network" or "I can't do electronic health record because of telecommunications cost." We want to build this network so that everyone can have access to services they need. We want to have a day of telehealth activities in Montana represented by the map below:



4. Describe how for-profit network participants will pay their fair share of the network costs.

The current design of this network does not include any for-profit participants. All rural health care hospitals and community health centers in the state are not for profit organizations. However, as we plan for the future development of this network, our marketing plans will include developing a pricing scheme so that for profit entities can either become members of the network or purchase time on the network (e.g. Blue Cross/Blue Shield – so that they can communicate electronically with all networks in the state or with physician clinics).

Additionally, Montana has developed a Health IT Task Force (Health e-Montana) that is exploring opportunities for developing statewide shared medical records protocols, and MHTA members are also members of the Health e-Montana Task Force. The Health e-Montana Task Force is a grass-roots coalition of healthcare providers, state and federal agencies, consumers and other stakeholders promote the use of electronic health information technology throughout the state. The Task Force is committed to coordinating with the state, as well as with federal initiatives, to promote the electronic exchange of health information. The mission of the Task Force is to support, promote, and encourage the exchange of secure and reliable health information among stakeholders and regional networks to improve the safety, quality, and efficiency of healthcare through the adoption of electronic health records along with other forms of health information technology.

The vision of the Health e-Montana Task Force is to develop a framework that allows for the efficient electronic universal exchange of patient-centric and secure health records to improve healthcare quality and patient safety. Independent physicians are also engaged in the Health e-Montana Task Force, and we are working collaboratively with them because it is conceivable that they will access the network once their initiatives are operational. As we move forward with our plan to implement a statewide secure broadband healthcare network, one of our design study activities will be the development of a pricing scheme for participating physicians as well as for profit corporations such as Blue Cross/Blue Shield.

5. Identify the source of financial support and anticipated revenues that will pay for costs not covered by the fund.

Currently each Telemedicine Network in Montana is independent and operates on an annual budget that is approved by the sponsoring organization(s). The aggregate annual budget for the three largest telemedicine networks in the state is nearly $1.5 million, and their partner sites on their networks commit over $500,000 on an annual basis to supporting telehealth activities in their facilities and communities. With the purchase of the routers identified in this proposal, each Network will be responsible for purchasing additional bandwith available on the "Transaria Cloud" that they need to expand services over their network. This proposal will allow us to expand our capacity by strategically placing hardware throughout the state of Montana that will allow incremental growth driven by strategic and business relationships. From a financial perspective, MHTA members are finding the need for additional bandwidth because of multiple interconnections among networks. The added cost of doing business will be a strategic decision

based on sound financial and business initiatives with each of the organizations conducting business over the network. This strategy distributes the expense of the network appropriately among the organizations using it for expanded business purposes.

We have secured the match requirements from the foundations from the largest hospitals in Montana, including Benefis Healthcare Foundation in Great Falls ($10,000); Billings Clinic Foundation in Billings ($10,000); Community Medical Center in Missoula ($10,000); Bozeman Deaconess Hospital Foundation in Bozeman ($10,000); St. Patrick Hospital Foundation in Missoula ($10,000); and St. Vincent Healthcare Foundation in Billings ($10,000). Additionally, preliminary inquiries with regional foundations have been favorable (e.g. Murdock Charitable Trust, Blue Cross/Blue Shield of Montana Foundation and Paul Allen Foundation). Since these foundations require an application for funding and we are seeking matching funds for the FAhRM Project, we will submit applications for their support once we have been notified of FCC funding. The match requirement for year two will be more significant since the funds requested will be significantly larger (estimated $2 million). Those funds will be sought through the Montana State Legislature, as well as other support mechanisms as necessary.

6. List the healthcare facilities that will be included in the network.

Healthcare facilities that will be included in this network are facilities that are associated with the MHTA Telemedicine Networks in the State. They include the Eastern Montana Telemedicine Network (27 sites), the Partners in Health Telemedicine Network (32 sites), and the REACH Montana Telemedicine Network (16 sites). The newest telemedicine networks in this state that will benefit the most are Telehealth networks sponsored by St. Patrick Hospital and Community Health Center, both located in Missoula. The expansion of the network will allow these two facilities to join the statewide Transaria Cloud. They will have expanded capacity to serve the rural communities in their networks, and they will have the capacity to connect to any MHTA member sites through this expanded secure, broadband healthcare network.

In addition, year two of this project will allow for participation in the secure healthcare network by any and all healthcare facilities in the state. The design study will help us identify the most appropriate and cost effective way to expand services to these facilities. It is our ultimate goal to ensure that the network that we build is not so expensive that it cannot be maintained after the grant period. We are all acutely aware of the financial constraints all of our partners have, and most specifically our rural partners. We felt it would be fiscally irresponsible of us to propose a network that no one can afford. That is why we are proposing a phased-in approach as we knew that in a few short months we could not identify all of the needs of our state and come up with a cost effective statewide plan. We are taking this undertaking very seriously and have had, as our primary concern, the needs of rural Montana in developing this plan. We are approaching this effort in a strategic, business manner, to ensure long term sustainability.

The facilities that will benefit from the enhanced network are identified by Telemedicine Network on the attached facility list.

7. Provide the address, zip code, Rural Urban Commuting Area (RUCA) code and phone number for each health care facility participating in the network.

The address, zip code, Rural Urban Commuting Area (RUCA) code and phone number for each health care facility participating in the network is identified by Telemedicine Network on the attached facility list.

8. Indicate previous experience in developing and managing telemedicine programs.

Montana has been an early adopter of telemedicine – we have had an active telemedicine program since 1991. We are fortunate to have three nationally recognized telemedicine networks in our State, all of which were established in the early 1990's. The Montana Healthcare Telecommunications Alliance began in 1995 when individuals from healthcare organizations across Montana came together to discuss common interests, share expertise, and promote advancements in telecommunications through video teleconferencing and telemedicine. As a consortium of key telehealth stakeholders, the Alliance's primary goal is to promote the wide spread adoption of telehealth through collaboration, interoperability and cost reduction of telecommunications. Our number one focus is to provide rural healthcare access.

MHTA is currently engaged in developing communication protocols for the mobilization of telemedicine networks in a six-state region (Montana, Idaho, Washington, Wyoming, and North and South Dakota) with regards to a bioterrorism event. A series of infectious disease educational programs occurred in August 2006 and provided data to demonstrate the extent to which our telemedicine networks are prepared to respond and serve as a resource for the State Departments of Public Health in a bioterrorist event or disaster. This is a subject that has been discussed in quarterly MHTA meetings, and over the past three years drills linking the hospitals, clinic sites, and the Montana Department of Public Health were conducted to highlight a statewide disaster readiness plan.

Doris Barta, Grants Director for St. Vincent Healthcare, is currently the President of the Board of MHTA. Ms. Barta has extensive experience in working with telehealth networks, securing more than $5 million in grants for the EMTN and PHTN networks, both of which are operated by health centers in Billings, Montana. She was instrumental in the development of one of the first telehealth networks in Montana when she and Thelma McClosky-Armstrong implemented the Eastern Montana Telemedicine Network operated by Billings Clinic in Billings, Montana. Barta is also the grants manager for an OAT grant that funded an eight state regional telemedicine resource center, the Northwest Regional Telemedicine Resource Center (NRTRC) where the fiduciary and administrative functions reside with St. Vincent Healthcare and the operations of the center are housed out of Inland Health Services in Spokane Washington. Ms. Barta is also a member of the Board of Directors for the NRTRC. Her experience in grant oversight and network implementation is invaluable in the development of the FAhRM Project.

The MHTA leadership also includes the Executive Directors of the three largest telemedicine networks in the State (EMTN – Thelma McClosky Armstrong, PHTN – Tom Brewer and RMTN

– Jack King) as well as other key staff in the sponsoring organizations. These three networks have a long history of collaboration with daily interconnection activities occurring so that the citizens of Montana get the healthcare services they deserve.

The information below highlights the experience and expertise of these three networks:

EASTERN MONTANA TELEMEDICINE NETWORK

The **Eastern Montana Telemedicine Network** began as a cooperative effort between Billings Clinic and five rural healthcare facilities in eastern Montana to research the potential of interactive videoconferencing in improving access to medical specialty and mental health services. Today EMTN has 27 partners in 19 rural and frontier communities throughout eastern and central Montana and northern Wyoming. Operational since September 1993, the EMTN continues to pursue its original goal: *To utilize two way interactive video conferencing technology to deliver specialist medical and mental health services, continuing medical and higher education, administrative and telebusiness services.*

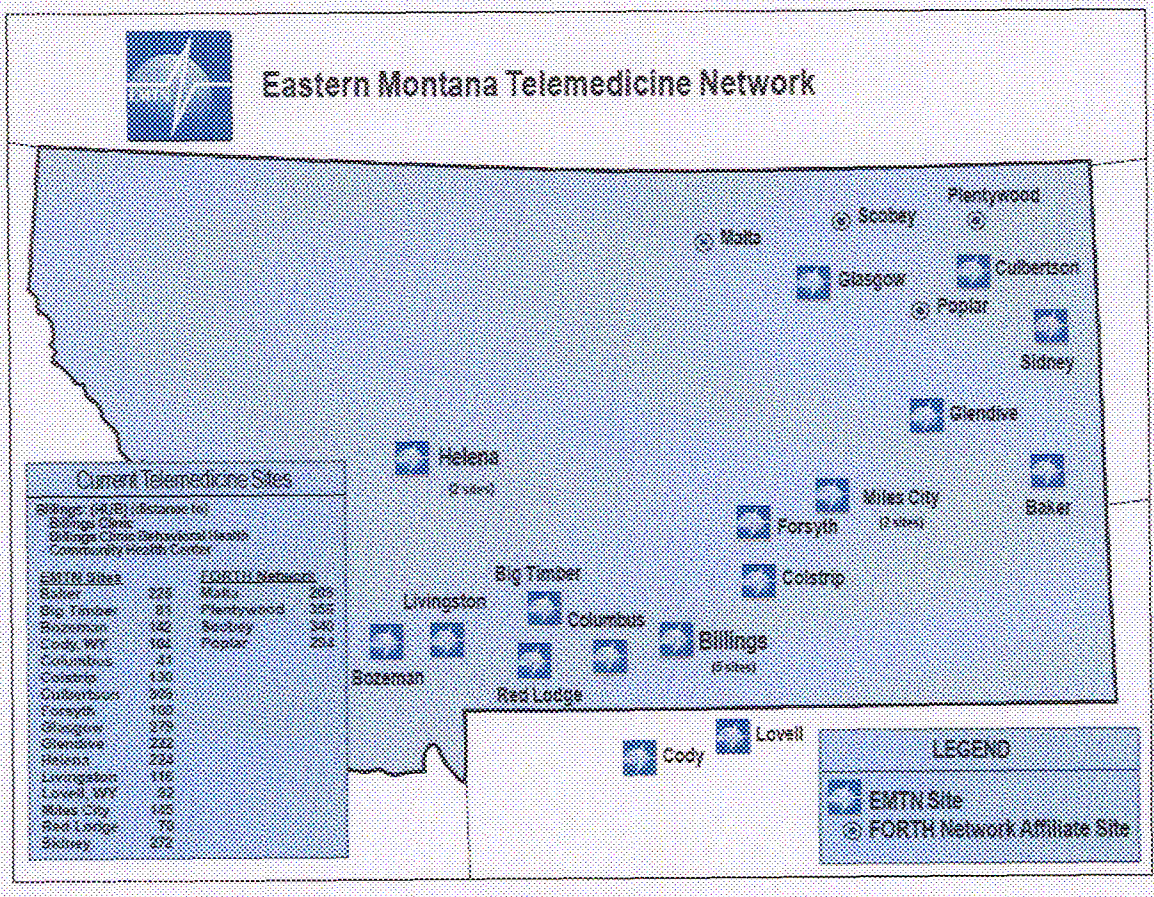
EMTN Partners

EMTN has received three competitive grants from two federal agencies supporting the growth and development of the network: They include:

- *Rural Utilities Services (September 1993):* Distance Learning and Telemedicine Grant program funded the equipment for the first five rural sites:
  - Roosevelt Memorial Hospital (Culbertson)
  - Sidney Health Center (Sidney)
  - Glendive Medical Center (Glendive)
  - Eastern Montana Community Mental Health Center (Miles City)
  - Holy Rosary Health Center (Miles City) This equipment is now located at MHA in Helena.
- *Office for the Advancement of Telehealth* telemedicine grant program (October 1994-September 1997) (formerly ORHP telemedicine grant program)
  - Colstrip Medical Center (Colstrip)
  - Deaconess Behavioral Health Clinic (Billings)
  - Frances Mahon Deaconess Hospital (Glasgow)
  - Fallon Medical Complex (Baker)
  - Yellowstone City-County Health Department, site of the Montana Family Medicine Residency Program
- *Office for the Advancement of Telehealth* telemedicine grant program (September 2000-August 2003)
  - North Big Horn Hospital (Lovell Wyoming)
  - Phillips County Hospital (Malta)
  - Daniels Memorial Hospital (Scobey)
  - Sheridan Memorial Hospital (Plentywood)
  - Northeast MT Health Services (Poplar)
  - Cody Clinic (Cody, Wyoming)
  - Pioneer Medical Center (Big Timber)
  - Livingston Healthcare (Livingston)

Between 1997- 2005 six additional partners joined EMTN.

- Stillwater Community Hospital (Columbus)
- Miles City Healthcare Clinic (Miles City)
- Rosebud Healthcare Center (Forsyth)
- Red Lodge Clinic (Red Lodge)
- Montana Primary Care Association (Helena)
- Bozeman OB/GYN (Bozeman)



In addition to connecting to each other, EMTN members can connect with compatible networks throughout the state, region and nation. Through the Montana Healthcare Telecommunications Alliance, EMTN connects to healthcare facilities throughout the state ensuring that care can be provided no matter where the patient lives.

Network Activity

The year 2005-2006 marked EMTN's twelfth anniversary. EMTN has a reputation as a mature and successful telemedicine network, a leader in the nation. Since its inception EMTN has conducted 15,728 clinical encounters averaging over 1200 encounters annually.

During 2005-2006 EMTN upgraded its entire network to H.323/H.264 videoconferencing technology. This upgrade supports improved video and audio quality and facilitates moving telemedicine technology into the clinical practice flow.